En3 Engineering & Consultancy

EQUIVALENCE OF STANDARDS EVALUATION

Date: February 10, 2025

Product: **3200 IMPACT THERMAL STOREFRONT SYSTEM**
Large Missile Impact Resistant (HVHZ)

Manufacturer: **Trulite Glass and Aluminum Solutions**
1750 Founders Pkwy, Suite. 154,
Alpharetta GA, 30009
P (800) 432-8132

Code: 2023 Florida Building Code 8TH Edition

ERNESTO NICOLAS LICENSE No. 79198 STATE OF FLORIDA PROFESSIONAL ENGINEER

Ernesto Nicolas

Digitally signed by Ernesto Nicolas
Date: 2025.02.10 21:06:27 +08'00'

Compliance Method: FAC Product Approval Rule Chapter 61G20-3.015(5)(d) – Equivalence of Standards

Certification of Equivalence: The testing standards listed below, although not explicitly referenced within the above noted building code, are hereby deemed equivalent for the purpose of determining this product's compliance with the above noted code.

Test Reports:

Test Laboratory	Report Number	Test Standard
Intertek	Q7425.01-450-18-R0, signed and sealed by Tanya Dolby, P.E. FL#93536 & Miami-Date Test Proposal No. 23-0639 dated July 21, 2023	TAS 202, TAS 201, TAS 203
Intertek	M3224.01-450-18-R0, signed and sealed by Vinu Abraham, P.E. FL#53820	TAS 202, TAS 201, TAS 203
Fenestration Testing Laboratory	12037, signed and sealed Idalmis Ortega, P.E. 76905	TAS 202, TAS 201, TAS 203
Fenestration Testing Laboratory	9425, signed and sealed by Idalmis Ortega, P.E. 76905	TAS 202, TAS 201, TAS 203
Fenestration Testing Laboratory	5956, signed and sealed by Julio Gonzalez, P.E. FL#37275	TAS 202, TAS 201, TAS 203
Fenestration Testing Laboratory	7458, signed and sealed by Marlin Brinson, P.E. FL#60749	TAS 202, TAS 201, TAS 203
Fenestration Testing Laboratory	5386, signed and sealed Michael R. Wenzel, P.E. 11490	TAS 202, TAS 201, TAS 203
Fenestration Testing Laboratory	5140, signed and sealed by Idalmis Ortega, P.E. 76905	TAS 202, TAS 201, TAS 203
Fenestration Testing Laboratory	2109, reviewed by Edmundo Largaespada, P.E.	TAS 202, TAS 201, TAS 203

Performance Tests Conducted:

- TAS 202-94 (Air, Water and Uniform Static Load Tests)
- TAS 201-94 (Large and Small Missile Impact Test)
- TAS 203-94 (Cyclic Wind Pressure Load Test)

Equivalency Evaluation to AAMA 501-15:

- Code Requirements for testing to AAMA 501-15:
    - Section 1709.8.4 of the Florida Building Code requires glazed curtain wall, window wall and storefront systems to be tested in accordance with the requirements of this mentioned section and the laboratory test requirements of the American Architectural Manufacturers Association (AAMA) Standard 501 with HVHZ complying with Sections 2411.3.2.1. 1
        - This product is tested to HVHZ requirements and Product approval is for HVHZ. Therefore, Section 2411.3.2.1.1 governs with regards to test load sequence and load duration.
        - All other requirements of Section 1709.8.4 must be met.
        - Above listed test reports were conducted in accordance with TAS 202 and its required load sequence and load duration.

- Conformance to AAMA 501-15:
    - Laboratory Test requirements of AAMA 501-15 include sections listed as required and as optional and they are as follows:
        - Required Tests – All required testing were performed and documented in the above listed test reports and demonstrate compliance with FBC Sections 1709.8.4 and 2411.3.2.1.1 test load sequence and duration.

            Test Load Sequence as per TAS 202:
            - ASTM E283 Air Leakage Test
            - ASTM E330 Preload Test at 50% DP
            - ASTM E330 Load Test at 100% DP
            - ASTM E331 Water Infiltration
            - ASTM E330 at 150% DP

            The following sections in AAMA 501-15 are listed as optional and were not performed.
            - AAMA 501.1 Water penetration test under dynamic air pressure
            - AAMA 501.4 Inter-story lateral displacement test
            - AAMA 501.7 Inter-story vertical displacement test
            - AAMA 501.5 Thermal Cycling test

- Conclusion

  Based on the above evaluation, the Laboratory Test requirements of the American Architectural Manufacturers Association (AAMA) Standard 501 with HVHZ complying with Section 1709.8.4 and Section 2411.3.2.1.1 of the 2023 Florida Building Code have been met.